

A NEW SOLIFUGID ARACHNID FROM TABLE MOUNTAIN, CAPE.

SOLPUGA GRINDLEYI, SP. N.

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Though the Solifugae constitute but a small order of the Arachnida, the group is extremely well represented in the South African region, 196 species being now recorded from the area. In particular southern Africa abounds with species of the family Solpugidae; notably the genera *Solpuga* and *Solpugema*, which account for no less than sixty-five of the South African species. It is no surprise, therefore, to find that a new species of Solifugid, recently taken on Table Mountain, in the Cape Peninsula, also belongs to the genus *Solpuga*.

In contrast to the rest of South Africa, Solifugae are rare in the Cape Peninsula and only five species, excluding the new one, are recorded from the area. They are *Solpuga fusca* Koch (1842), *Solpuga monteiroi* Pocock (1895), *Solpugema vincta* (Koch, 1842), *Blossiola litoralis* (Purcell, 1899) and *Toreus capensis* Purcell (1899). The new species, *Solpuga grindleyi*, is quite easily distinguishable from each of these, not only in the laboratory but also in the field. In size and in general appearance it is similar to *Solpuga fusca*, but whereas the latter is a black-legged species, in *S. grindleyi* the legs are coloured yellow-ochre. The species is very much smaller than *Solpuga monteiroi* and the head-plate is light yellow-ochre whereas in the latter species the cephalic plate is very dark and may be almost black. The new species also lacks the median black abdominal band of *Solpugema vincta*.

Examination of the chelicerae (mandibles) of both male and female shows *Solpuga grindleyi* to be distinct from any other species of the genus so far recorded from southern Africa. The dentition of both the upper and lower jaws—not only the position of the teeth but also their number—at once separates it from all the other Cape species including *S. ferox* Pocock (1895), *S. schlecteri* Purcell (1899) and *S. bovicornis* Lawrence (1929) as well as the species already mentioned.

The new species closely resembles *Solpuga fusca* but is distinct from that species not only in coloration and in the dentition of the mandibles, but also with regard to the flagellum of the male, that of *S. fusca* being *bifurcate* while in the new species the flagellar apex is entire.

The author has two specimens of *Solpuga grindleyi* in his possession. A male specimen bearing the label 'Solifugid—Table Mountain' was discovered among the class-material used in the Zoology Department for teaching purposes, while

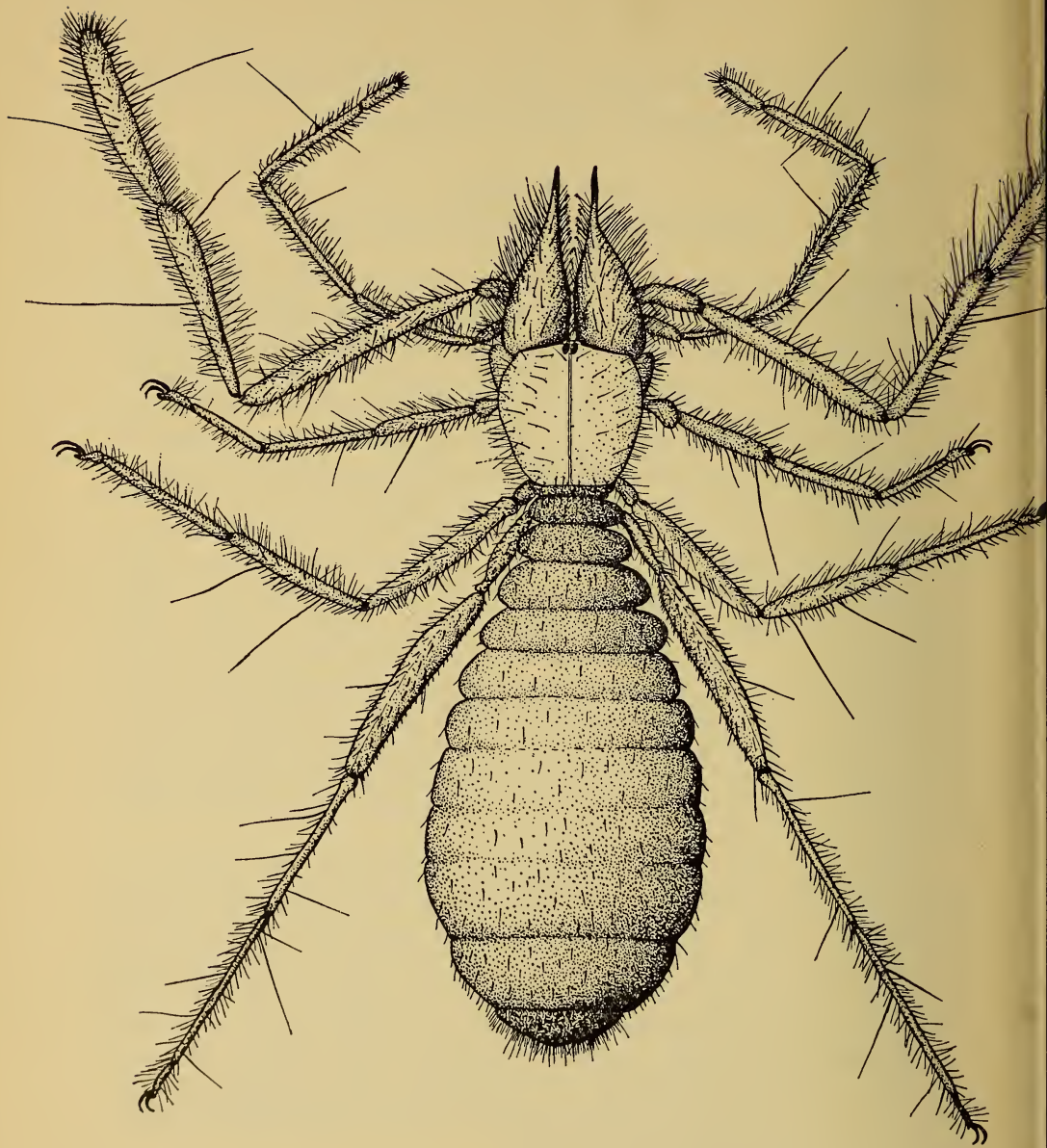


FIG. 1

Solpuga Grindleyi, sp. n. Holotype (♀) × 10.

an adult female was taken complete with nest on the Camps Bay side of Table Mountain by Mr. J. Grindley on 20 June 1958. As the female specimen was studied alive and as the male, though well preserved, does not bear an adequate label, it has been decided to designate the female as Holotype for the new species. The male therefore becomes the Allotype.

Solpuga grindleyi sp. n.

DESCRIPTION OF HOLOTYPE (Female)

Living coloration. Head-plate yellow-ochre with jet-black eyes; chelicerae light yellow-ochre over most of their surface but giving way to dark brown towards their tips. Abdomen dull grey at the sides and between segments, tergites greyish brown; uniformly light grey ventrally. Ventral surface of thorax light yellow, malleoli yellow with dark brown distal margins. Legs for the most part yellow-ochre, tending towards pale yellow on the tibiae and tarsi of the first three pairs. Pedipalps dark yellow-ochre. Setae in general agreeing with the colour of that part of the body on which they occur, but setae on the chelicerae dark brown against their light yellow-ochre background.

Apparent proportions. Cephalic plate as broad as long, slightly shorter than chelicerae. Abdomen approximately four times length of cephalic plate and twice as broad, evenly rounded. Palp with both tibia and tarsus club-shaped; setae on pedipalps not arranged in a definite pattern, but several very long setae on each of the last three segments. First pair of walking-legs slender, two-thirds length of palp. Second walking-leg somewhat more robust but shorter than first leg. Third leg stouter than both preceding appendages and equal in length to first leg. Fourth pair of legs slender except for expanded femur, longer than all other appendages, including the pedipalp.

Measurements. Total length, 12.4 mm.; greatest (abdominal) width, 3.5 mm. Length of chelicerae, 2.4 mm.; length of head-plate, 2.0 mm.; greatest width of head-plate, 2.0 mm. Length of pedipalp, 9.2 mm.; femur, 3.0 mm.; tibia, 2.5 mm.; tarsus, 2.6 mm. Length of first walking-leg, 6.6 mm.; second leg, 5.0 mm.; third leg, 6.8 mm. Length of last leg, 9.8 mm.; femur, 3.0 mm.; tibia, 2.6 mm.; tarsus plus metatarsus, 3.2 mm.

Remarks. The Holotype was taken alive from under a small stone, complete with nest. The latter consisted of a shallow depression lined with soft chips of wood and a few small pieces of bark. The specimen was kept with part of its nest in a glass tube for some weeks without feeding. It was then given a number of small beetle larvae, which it readily devoured. Vision is apparently poor, as the animal was not disturbed by movements 15 cm. away from it, except when these movements cast a shadow over it. In the latter case, and when a finger was moved to within 5 cm. of the animal, it reared up into

the defence attitude common among the Solifugae. The entire body is raised from the ground, the back legs being bent so that the body acquires an angle of some 30° from the horizontal, the pedipalps are elevated and held far apart, the first pair of legs is lifted from the ground and pointed forwards and the chelicerae are held agape. The animal orientates itself so as to face continually the source of potential danger.

THE MALE SPECIMEN (Allotype)

Colours similar to but somewhat darker than those of the female. Legs and pedipalps tending towards light brown on tibiae and tarsi of all appendages

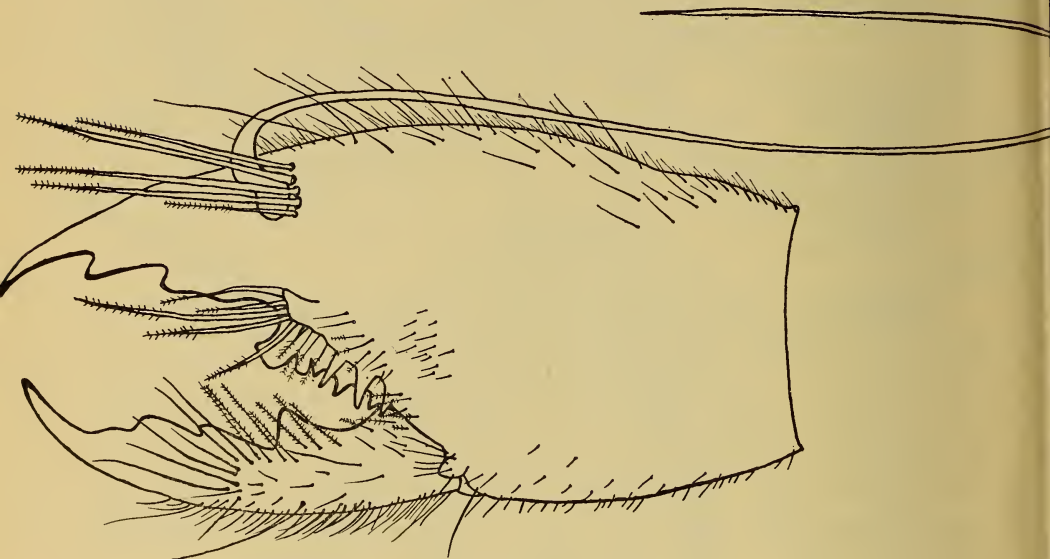


FIG. 2

Solpuga Grindleyi sp. n. Male Chelicera $\times 40$.

and also on the femur of the hind-most leg, though darkish yellow-ochre still predominates. Proportions of parts as for female except that the abdomen is slightly narrower; total body length, 13.6 mm. Body and appendages more setose than in Holotype and the setae themselves very much darker, varying from light brown on the legs to very dark brown on the head-plate and abdomen.

Male chelicera as shown in figure 2. Flagellum very long and slender, being approximately twice the length of the chelicera itself; flagellar shaft tapering evenly, without spicules or denticles. Ventral jaw with a large blunt tooth proximally, followed by two less prominent rounded processes; a convex surface leads to the curved and tapered fang. Dorsal jaw with two large rounded teeth preceding the fang-tip. Between the proximal tooth and the articulation

of the lower jaw occurs, after a short adentate region, a double row of processes between which the lower jaw fits when at rest. The inner row of processes consists of a flat-topped projection distally to which are attached four stout elongate plumose setae pointing forwards, followed by three sharp spines. The outer row projects somewhat lower than the inner row and consists of two naked flat-topped processes, the first (distal) process being much larger than the second, followed by three sharp spines. Five extremely long, stout, plumose setae are attached immediately behind the base of the flagellum and lie over it, pointing forwards. The distal halves of both jaws are without setae but the proximal part of the lower jaw is quite heavily setose, the setae on the ventral side being simple, those towards the upper surface plumose.

Both types have been deposited in the South African Museum.

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